What is claimed is:

1. A method for calculating an optimum display size for a visual object comprising the steps of:

compressing a visual object with a visual object encoder;

for a predetermined number of frames of the visual object, calculating one or more a signal-to-noise ratios;

calculating a coding difficulty value as a function of the one or more calculated signal-to-noise ratios; and

determining the optimum display size for the visual object based on at least one of the coding difficulty value and a visual object transmission rate.

2. The method of claim 1, wherein the visual object comprises one of a graphical image and video.

3. The method of claim 2, wherein the graphical image comprises one of a banner advertisement, a photograph, and a graphical object.

4. The method of claim 3, wherein the video comprises one of a stored video and a live television signal.

5. The method of claim 1, further comprising the step of transmitting the visual object over a computer network.

6. The method of claim 1, further comprising the step of transmitting the visual object over a wireless medium.

7.   The method of claim 6, wherein the wireless medium comprises one of radio frequency waves, infrared light waves, and a form of electromagnetic coupling.

5   8.   The method of claim 1, further comprising the step of receiving a form of payment as a requirement to encode the visual object.

9.   The method of claim 1, further comprising the step of calculating signal-to-noise ratios for one of: sets of frames of the visual object, a
10   sampling of frames of the visual object, and each frame of the visual object.

10.   The method of claim 1, wherein the visual object transmission rate comprises one or more values measured in units of information per unit of time.

15   11.   The method of claim 10, wherein the visual object transmission rate comprises a speed at which binary digits are transmitted.

12.   The method of claim 1, wherein the step of calculating a coding difficulty value as a function of the calculated signal-to-noise ratios further comprises
20   calculating the coding difficulty value as a function of a harmonic mean of the signal-to-noise ratio.

13.   The method of claim 1, wherein the step of determining the optimum display size for the visual object comprises the step of associating the
25   coding difficulty value and a visual object transmission rate of the visual object with one or more empirically determined functions.

14.   The method of claim 13, further comprising the step of associating one of a plurality of empirically determined stair step functions with
30   values indicating a relative size of visual object on display device.

15. The method of claim 1, further comprising the step of automatically displaying the visual object with the optimum display size.

16. The method of claim 1, further comprising the step of displaying the visual object with the optimum display size in response to a user command.

17. A method for calculating an optimum display size for a visual object comprising the steps of:

for a predetermined number of frames of visual object, calculating a step size;

deriving a coding difficulty value as a function of step size; and

determining the optimum display size for the visual object based on at least one of the coding difficulty value and a visual object transmission rate.

18. The method of claim 17, wherein the visual object comprises one of a graphical image and video.

19. The method of claim 18, wherein the graphical image comprises one of a banner advertisement, a photograph, and a graphical object.

20. The method of claim 19, wherein the video comprises one of a video downloaded to a file from the internet, a live television signal, internet streaming, and video retrievable on a portable storage medium.

21. The method of claim 17, further comprising the step of receiving the visual object from a computer network.

22. The method of claim 17, further comprising the step of receiving the visual object from a wireless medium.

23.   The method of claim 22, wherein the wireless medium comprises one of radio frequency waves, infrared light waves, and a form of electromagnetic coupling.

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24.   The method of claim 17, further comprising the step of receiving a form of payment as a requirement to decode the visual object.

25.   The method of claim 17, further comprising the step of

10   calculating step sizes for one of: sets of frames of the visual object, a sampling of frames of the visual object, and each frame of the visual object.

26.   The method of claim 25, wherein the step of calculating the step size further comprises the step of calculating the step size based upon a first

15   transformation coefficient.

27.   The method of claim 26, wherein the step of calculating the step size further comprises the step of calculating the step size based upon a second transformation coefficient.

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28.   The method of claim 17, further comprising the step of calculating a mean value of the calculated step sizes.

29.   The method of claim 17, wherein the step of determining the

25   optimum display size for the encoded visual object comprises the step of associating the coding difficulty value and the visual object transmission rate of the visual object with one of an empirically determined function.

30.   The method of claim 29, further comprising the step of

30   associating one of a plurality of stair step functions and a plurality of diagonal zones with values indicating a relative size of visual object on a display device.

31.   The method of claim 17, further comprising the step of automatically displaying the visual object with the optimum display size.

5   32.   The method of claim 17, further comprising the step of displaying the visual object with the optimum display size in response to a user command.

33.   The method of claim 17, wherein the step of displaying a

10   message further comprises displaying a message with one of a cathode ray tube, a liquid crystal display, a light emitting diode display, and a projector.

34.   The method of claim 1, wherein the step of displaying a message further comprises displaying a message with one of a cathode ray tube, a

15   liquid crystal display, a light emitting diode display, and a projector.

35.   A system for calculating an optimum display size for a visual object comprising:

an encoder for compressing a visual object, for calculating a signal-to-noise ratio for a predetermined number of frames of the visual object, for calculating a coding difficulty value as a function of the calculated signal-to-noise ratios;

a display size selector for determining an optimum display size of the visual object based on the coding difficulty value and a visual object transmission rate; and

a display device for displaying a message indicating the optimum display size for the encoded visual object.

36.   The system of claim 35, further comprising an audio encoder and an audio/video system multiplexer.

37.   The system of claim 35, wherein the encoder calculates a harmonic mean of a peak to noise ratio for a predetermined number of frames of the visual object.

38.   The system of claim 35, wherein the display size selector determines the optimum display sized based upon an empirically derived relationship between the coding difficulty value and the visual object transmission rate.

39.   The system of claim 35, wherein the visual object comprises one of a graphical image and video.

40.   A system for calculating an optimum display size for a visual object comprising:

an decoder for decompressing a visual object, for calculating a step size for a predetermined number of frames of the visual object, for estimating a

5   coding difficulty value as a function of step size;

a display size selector for determining an optimum display size of the visual object based on the estimated coding difficulty value and a visual object transmission rate; and

a display device for displaying a message indicating the

10   optimum display size for the encoded visual object.

41.   The system of claim 40, further comprising a visual object render for generating the decompressed visual object.

15   42.   The system of claim 40, further comprising an audio decoder and an audio/video system de-multiplexer.

43.   The system of claim 40, wherein the decoder estimates a harmonic mean of a peak to noise ratio for a predetermined number of frames of the

20   visual object.

44.   The system of claim 40, wherein the display size selector determines the optimum display sized based upon an empirically derived relationship between the coding difficulty value and the visual object transmission rate.

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45.   The system of claim 40, wherein the visual object comprises one of a graphical image and video.

46.   The method of claim 17, further comprising the step of

30   displaying a message indicating the optimum display size for the visual object.

47.   A method for calculating an optimum display size for a visual object comprising the steps of:

compressing a visual object with a visual object encoder;

determining the optimum display size for the visual object based on at least one of a coding difficulty value and a visual object transmission rate; and

displaying a message indicating the optimum display size for the encoded visual object.

48.   The method of claim 47, wherein the step of determining an optimum display size further comprises the step of evaluating one of a quality of the display device and a size of the display device.

49.   The method of claim 47, further comprising the step of automatically displaying the visual object with the optimum display size.

50.   The method of claim 47, further comprising the step of displaying the visual object with the optimum display size in response to a user command.

51.   The method of claim 1, further comprising the step of displaying a message indicating the optimum display size for the encoded visual object.